



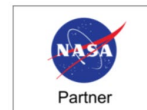
User Interface

Tim Hostetler, Jennifer Chen
and The ADS Team

ADS Users Group Meeting, 20-21 Nov. 2025



CENTER FOR
ASTROPHYSICS
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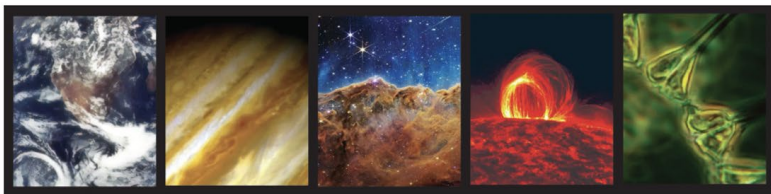


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QUICK FIELD: [author](#) [first author](#) [abstract](#) [year](#) [fulltext](#)

all search terms

Search...

WELCOME TO THE **SciX Digital Library**

SciX covers and unifies the fields of Earth science, planetary science, astrophysics, heliophysics, and the NASA-funded biological and physical sciences. [Learn More](#).

**30M+**

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Citations

**~8000**

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Out of BETA!

Beta label removed on August 25th

SciX officially launched on September 29th



SciX



astrophysics data system

- New [home page](#):
 - For users who have never heard of SciX before
 - Explains what we do and why it's better than other options
- Coming soon:
 - New “About” page
 - Will explain what the team does, our skills & strengths, etc.

The screenshot shows the SciX website homepage. At the top, there is a navigation bar with the SciX logo, a search bar containing the text "Search 30M+ records in the Earth and space sciences...", and an "About" link. Below the navigation bar is a large banner with the text "Welcome to the Future of Scientific Discovery" overlaid on a collage of five scientific images: a galaxy, a nebula, a greenish abstract pattern, a planetary surface, and a fiery celestial body. In the center of the page, the SciX logo is displayed next to the text "Science Explorer". Below this, a paragraph states: "A comprehensive search engine and discovery platform that connects scientific literature to datasets, software, and products for researchers across the Earth and space sciences." At the bottom, there are five dark blue rounded rectangular boxes, each containing a statistic in large blue text and a description in smaller white text: "30M+ SCIENTIFIC DOCUMENTS", "16M+ ANNUAL USERS", "30+ YEARS OF NASA FUNDING", "8000 PEER REVIEWED JOURNALS", and "Free OPEN ACCE & OPEN SOURCE".

SciX

Search 30M+ records in the Earth and space sciences...

About

Welcome to the Future of Scientific Discovery

Science Explorer

A comprehensive search engine and discovery platform that connects scientific literature to datasets, software, and products for researchers across the Earth and space sciences.

30M+	16M+	30+	8000	Free
SCIENTIFIC DOCUMENTS	ANNUAL USERS	YEARS OF NASA FUNDING	PEER REVIEWED JOURNALS	OPEN ACCE & OPEN SOURCE



Abstract Page Updates

New Citation Formats

- Earth science journal formats: AGU, GSA, AMS
- Copy-formatted citation text

Publication

The Astronomical Journal, Volume 131, Issue 2, pp.
1163-1183. “

Citation

AGU

Skrutskie, M. F., Cutri, R. M., Stiening, R., Weinberg, M. D.,
Schneider, S., Carpenter, J. M., et al. (2006) The Two Micron All
Sky Survey (2MASS) *The Astronomical Journal*, 131(2), 1163–
1183, IOP. <https://doi.org/10.1086/498708>





Abstract Page Updates

Added tags for important metadata not currently visible on the abstract page:

- refereed, document type, collection, erratum, bibliographic group

As we add a more diverse set of records, including dataset and software, we want to display more clues as to what each record is.

Determining the Age of the Universe.

Huchra, J. [show details](#)

Refereed

Article

No Abstract

Publication

Endeavor 20 (1997): 139.

Publication Date

1997

Bibcode

1997Endvr..20..139H

Collection

astronomy

UAT Keywords (generated)

BETA

cosmic microwave background radiation

hubble constant

Bibgroup

CfA



Abstract Page Updates

UAT Keywords

- Enhanced keyword display with related keywords and search capability

UAT Keywords (generated) **BETA** [catalogs](#)  [infrared sources](#)  [surveys](#) 



UAT Keywords

Publication Date 2023-04-00

DOI 10.1088/1674-4527/acb980 10.48550/arXiv.2301.10678

arXiv arXiv:2301.10678

Bibc

Keyv

UAT Keywords (generated) **BETA**

E-Print Comment(s) Accepted for publication in Research in Astronomy and Astrophysics; doi:10.1088/1674-4527/acb980

Click magnifying glass to initiate new keyword search

Click concept to access UAT API call

Broader, narrower, or related concepts to modify your query

Down caret opens list of other broader, narrower, or related concepts

disks stars: neutron X-rays: binaries stars: emission-line

Astrophysics - High En

high energy astrophysics high energy astroph

high mass x-ray binary stars pulsars

Neutron stars

Millisecond pulsars

Optical pulsars

Radio pulsars

Rotation powered pulsars

Binary pulsars

Pulsar wind nebulae

Make Corrections



UAT autocomplete menu

UAT field searching is restricted to preferred labels

If input is similar to alternate label for UAT concept, suggests preferred label

The screenshot shows a search interface with the input 'uat:"asteroi' in the top bar. Below the input is a list of search results. The first result, 'Asteroids', is highlighted in blue. The list includes the following items:

- Asteroids
 - Asteroid, Minor planets
- Asteroseismology
 - Astroseismology, Stellar seismology
- Asteroid satellites
 - Asteroid moons, Binary asteroids, Binary systems, Multiple systems, Double asteroids, Satellites of asteroids, Minor planet moons, Binary small Solar System body systems, Multiple small Solar System body systems, Binary small Solar System bodies, Multiple small Solar System bodies, Multi-body asteroids, Binary SSSB systems, Binary SSSBs, Multiple SSSB systems, Multiple SSSBs, Multiple asteroids, Asteroid multiples
- Asteroid belt
- Asteroid occultation
- Asteroid surfaces
- Asteroid dynamics
- Asteroid rotation
- Trojan asteroids
 - Trojan group, Trojans
- Main belt asteroids

Suggests UAT concepts based on partial input

Lists all alternate labels so you can see what is most familiar to you



Download Facet Data

- Now available on all facets

Author

Search (case-sensitive) ×

Count ▼ ☰

[Download full list](#)

	Relevance	
<input type="checkbox"/> Brooks, D	Select All	737 >
<input type="checkbox"/> Tarle, G		729 >
<input type="checkbox"/> Miquel, R	Dynamics of Dark Energy	713 >
<input type="checkbox"/> Sanchez, E	Capeland, Edmund J.; Sami, M.; Tsujikawa, Shinji; show details	685 >
<input type="checkbox"/> Honscheid, K	2006 - International Journal of Modern Physics D - cited 1768	664 >
<input type="checkbox"/> Frieman, J		603 >
<input type="checkbox"/> Doel, P	Reconstructing Dark Energy	587 >
<input type="checkbox"/> Schubnell, M	Sahni, Varun; Starobinsky, Alexei; show details	572 >
<input type="checkbox"/> Gaztanaga, E	2006 - International Journal of Modern Physics D - cited 731	571 >
<input type="checkbox"/> Cutler, C		545 >



Download Visualization Data

- Available on all visualizations
- Allows you to download the data behind each visualization, to further analyze the information available

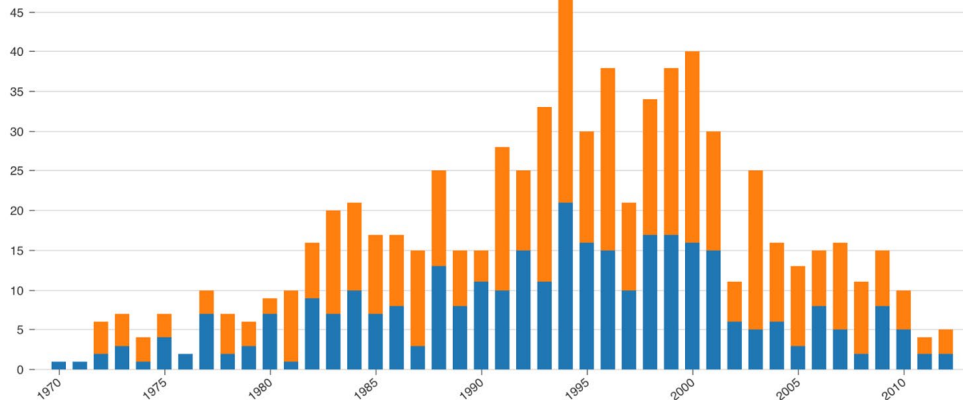
[Download CSV Data](#)

		TOTALS	REFEREED
Number of papers	?	741	326
Normalized paper count	?	205.4	77.4

Total Normalized

☒ Stacked ☐ Grouped

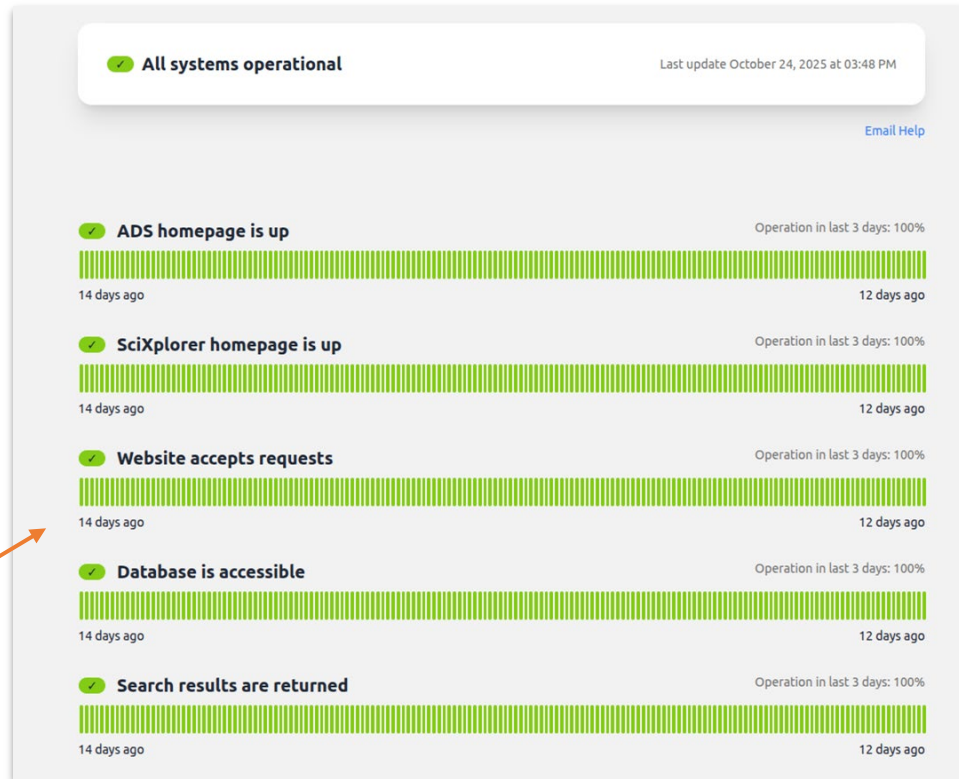
Non-refereed
Refereed





New System Status Page

- Linked in the footer on both ADS and SciX
- Allows users to see the current status and from the last few days for the ADS and SciX homepages and basic functionality



© The [SAO](#) Astrophysics Data System
help[at]scixplorer.org

SciX is a project created by the Astrophysics Data System (ADS), which is operated by the Smithsonian Astrophysical Observatory under [NASA](#) Cooperative Agreement 80NSSC21M0056.

Version: v0.26.0



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RESOURCES

About SciX
Give Feedback
SciX Help
System Status
Careers@SciX

Accessibility Conformance Report
Web Accessibility Policy
NASA Science Discovery Engine



Zotero Interoperability

- Zotero is a third-party bibliography management tool
- We've updated the Zotero plugin to save articles from SciX (was already working for ADS)

SciX Astrophysics Feedback

Saving to My Library

Dark Energy and the Cosmic Microwave Ba...
Full Text PDF

[Back to Results](#)

Full Text Sources

APS

Preprint

Data Products

Related Materials

Abstract

Dark Energy and the Cosmic Microwave Background Radiation

Dodelson, Scott ; Knox, Lloyd [show details](#)

Refereed Article

We find that current cosmic microwave background anisotropy data strongly constrain the mean spatial curvature of the Universe to be near zero, or, equivalently, the total energy density to be near critical-as predicted by inflation. This result is robust to editing of data sets, and variation of other cosmological parameters (totaling seven, including a cosmological constant). Other lines of argument indicate that the energy density of nonrelativistic matter is much less than critical. Together, these results are evidence, independent of supernovae data, for dark energy in the Universe.




Accessibility Conformance Report

Created a Voluntary Product Accessibility Template (VPAT)

- Report on our current level of conformance to the WCAG accessibility standards
- Linked from footer in both ADS and SciX
- We meet the WCAG 2.x standard

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SciX is a project created by the Astrophysics Data System (ADS), which is operated by the Smithsonian Astrophysical Observatory under NASA Cooperative Agreement 80NSSC21M0056.
Version: v0.26.0



Partner

RESOURCES

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System Status
Careers@SciX
Accessibility Conformance Report
Web Accessibility Policy
NASA Science Discovery Engine

SciX Accessibility Conformance Report


- 1.2.6 Sign Language (Prerecorded)
- 1.2.7 Extended Audio Description (Prerecorded)
- 1.2.8 Media Alternative (Prerecorded)
- 1.2.9 Audio-only (Live)
- 1.3 Adaptable
- 1.4 Distinguishable
- Operable**
- 2.1 Keyboard Accessible**
- 2.2 Enough Time
- 2.3 Seizures
- 2.4 Navigable
- 2.5 Input Modalities
- Understandable
- 3.1 Readable


2.1.1 Keyboard


Description


All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes, except where the underlying function requires input that depends on the path of the user's movement and not just the endpoints.

Conformance Notes

**ADS**

 **SUPPORTS**

**SciX**

 **SUPPORTS**



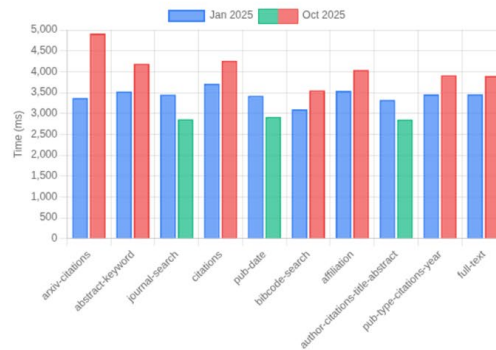
SciX Performance Report

January 2025 vs October 2025

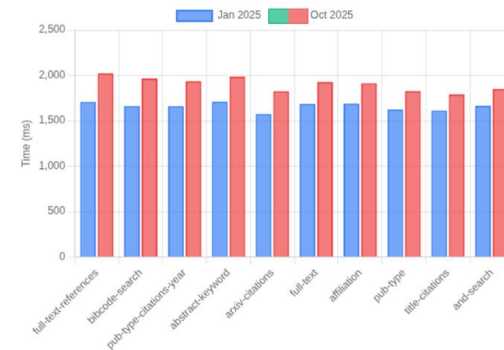
- Slight improvements to render time, possibly due to switching to client-side rendering on search results page

* These tests were done with no throttling

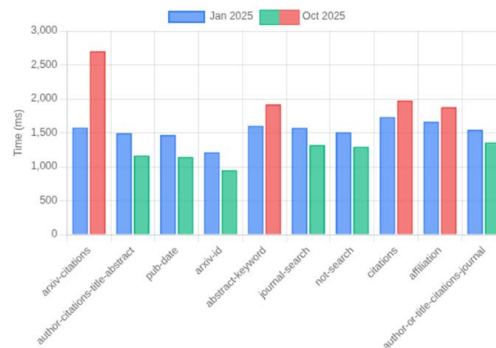
TTRL - Time to Request Loaded



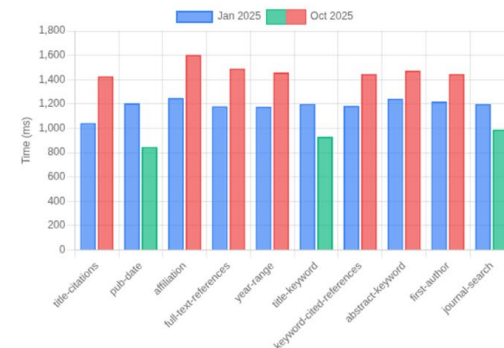
TTSBI - Time to Search Box Interaction



TTRS - Time to Results Shown



TTRR - Time to Results Rendered





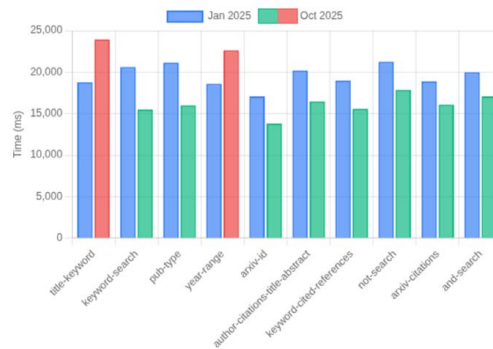
SciX Performance Report

January 2025 vs October 2025 (6x CPU throttling)

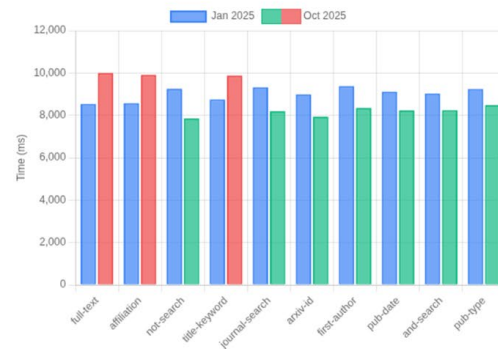
- Some improvements to performance when under a load

* These tests were done with the CPU throttled at 6x slower

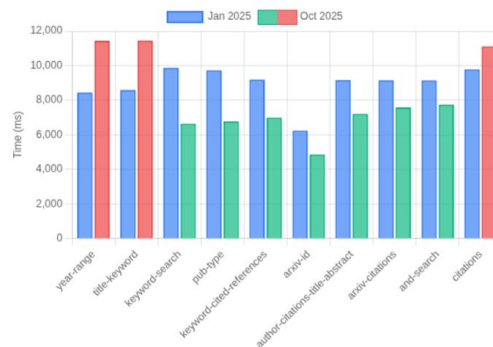
TTRL - Time to Request Loaded



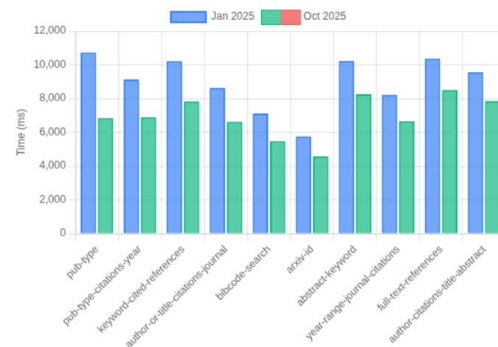
TTSBI - Time to Search Box Interaction



TTRS - Time to Results Shown



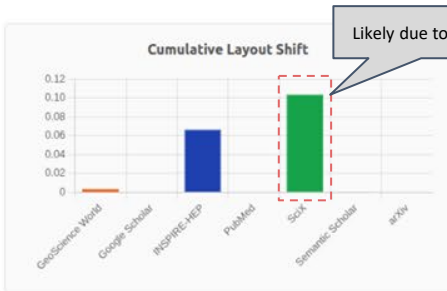
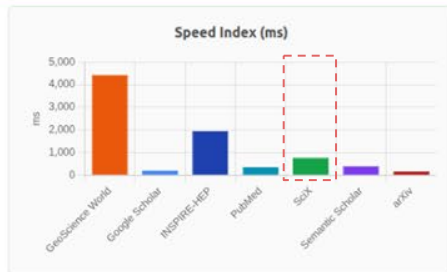
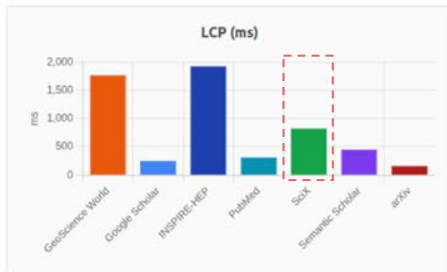
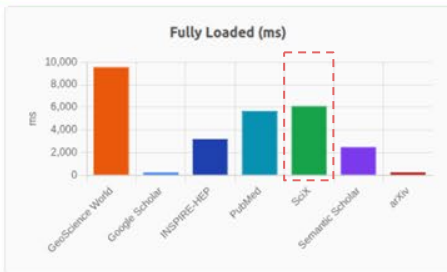
TTRR - Time to Results Rendered



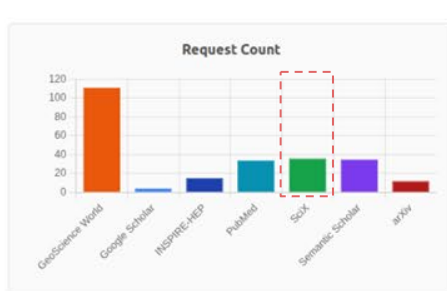


Competitor Performance Comparison: Home Pages

Home Pages (9 sites)



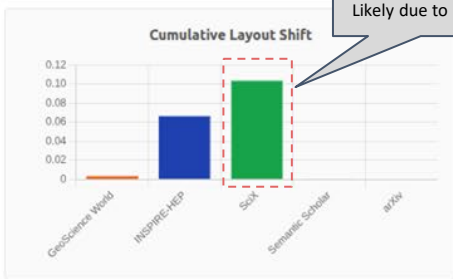
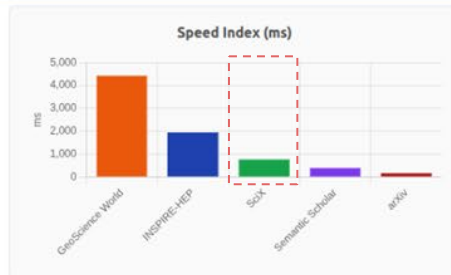
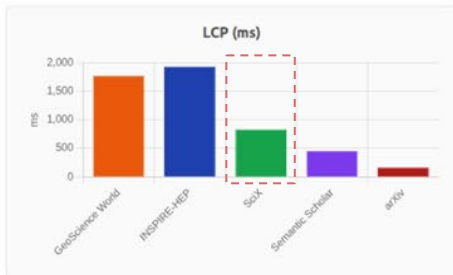
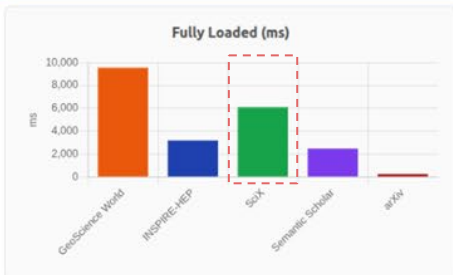
Likely due to banner



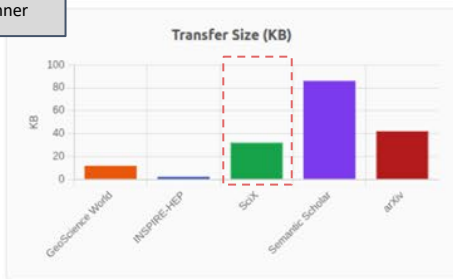


Competitor Performance Comparison: Article Pages

Article Pages (5 sites)



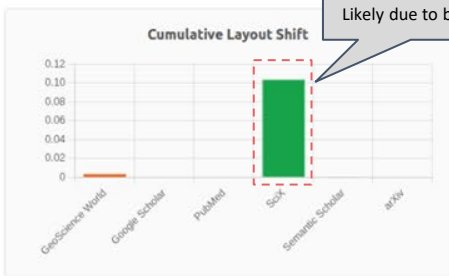
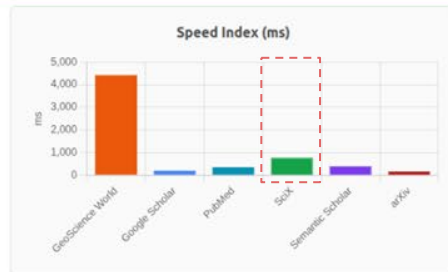
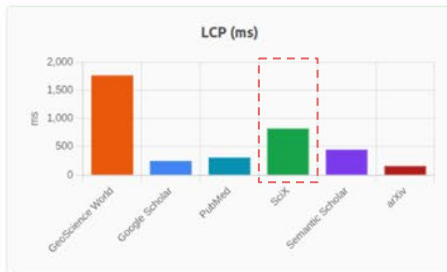
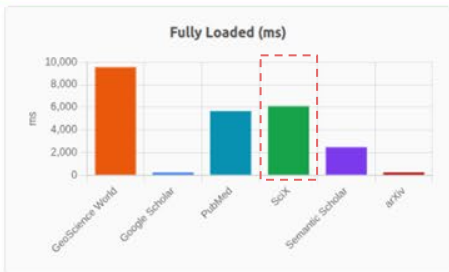
Likely due to banner





Competitor Performance Comparison: Search Pages

Search Pages (6 sites)



Likely due to banner

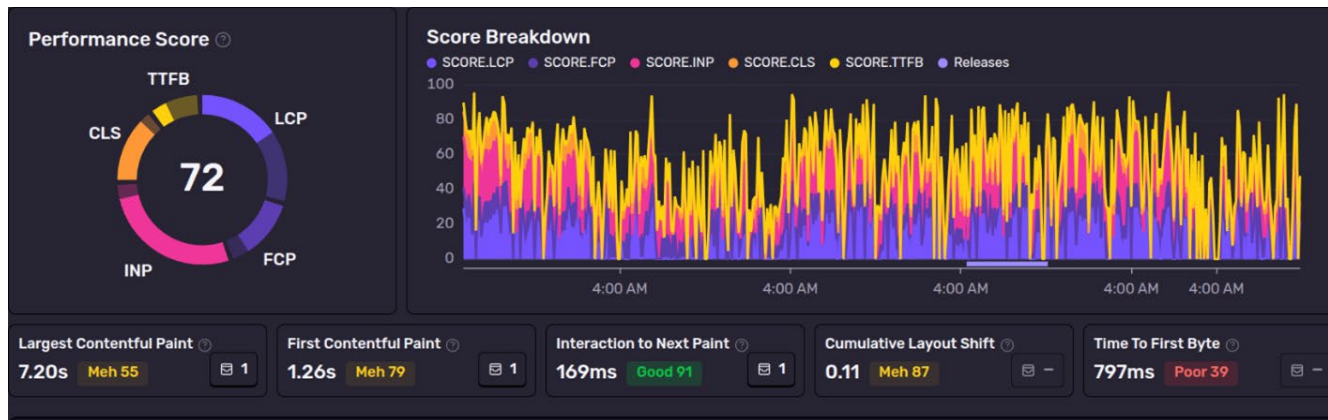




Internal Performance Monitoring

Web vitals tracking dashboard via Sentry allows us to see if a reported performance lag is on the user's end or a sign of larger performance problems.

Sentry has tools to explore performance regressions as a function of code releases.



The plan is to use Sentry and other tools to regularly monitor web vitals to ensure we catch regressions early (i.e. testing a new release) before many users are affected.

Questions?